VOLUME XIV NUMBER 4

THE ELEMENTARY SCHOOL TEACHER

DECEMBER 1913

EDUCATIONAL NEWS AND EDITORIAL COMMENT

School Tests Are Popular

The development of standard methods of testing the results of teaching in the various subjects of the curriculum has taken place within three or four years. Within that short time standard tests have come to occupy a very prominent place among methods of supervision, and the construction of test methods has become a frequent subject of investigation. The most widely used test is probably Mr. Courtis' arithmetic test, which he reports to have been given to two hundred thousand children. Wide currency has also been given to the Thorndike and Ayers handwriting scales and to the Hillegas-Thorndike scale for merit in English.

The New Courtis Tests

Mr. Courtis has now published two new tests. The first of these is a new arithmetic test based upon the experience gained with the earlier form of the test. It was found that the ability which was measured by the speed tests in the simple addition, subtraction, multiplication, and division problems did not closely correspond to the ability to use these processes in complex problems. The new test accordingly includes only complex problems in the four processes. The reasoning problems were omitted because it was found that success with them was too much a matter of ability to read.

Mr. Courtis also presents a group of entirely new tests which he classes under the general term "English." The same material is used ingeniously to serve as the basis for a variety of tests. The first part of a simple story is read for a dictation exercise. The

children then compose an ending to the story. A second and a third section are then read by the pupils to test rate and accuracy of reading and a fourth section is read aloud by the teacher to test memory by free reproduction. The material thus obtained is to be used to measure the quality and rate of handwriting; ability in composition, including avoidance of mistakes in spelling and punctuation; and the ability to gain and reproduce words and ideas from reading or from listening to oral presentation. In addition there is a speed test in copying letters.

It is highly desirable that these new tests be given a trial. Mr. Courtis displays great ingenuity in devising his tests so that they can be conveniently applied by a large number of people under widely different conditions, and by this means a large amount of representative material is gathered. School administrators can therefore gain experience which will be of great value to them in their supervisory duties and at the same time be of service in standardizing the tests if they will take the small amount of trouble necessary to apply the tests in their schools.

Some Questions for Investigation

The critical student may put some questions concerning these new tests which experience should answer. It is a question, for example, whether the same material can be used advantageously for all the grades above the second, whether conditions under which the handwriting is produced give a true measure of speed (the quality is measured by the Thorndike or the Ayers scales), whether the verbal memory measured in the first reading test is significant, etc. Doubtless some parts will prove to be of more value than others and possibly the test will have to be made somewhat less complex. We shall await with interest the results of the use of the tests.

F. N. F.

Economy of Time in Education

The problem of saving two years in American schools is discussed in the report on economy of time in education by the committee of the National Education Association which has been at work upon the problem for five years. The report is published by the United States Bureau of Education for free distribution.

For the most part the discussions contained in the report are

merely expressions of theoretical opinions to the effect that some means should be provided for solving the problem, accompanied by very *general* recommendations concerning how it *might* be done. A reader who is well acquainted with the plan of Comenius described in his *Great Didactic* as early as 1649, with the discussions by President Eliot of Harvard concerning the enriching of the grammar-school period which were published during the eighties and nineties, and with the suggestions by President Butler of Columbia published in 1903, will find little that is new in this publication.

For years we have been told that we take two years longer to achieve the educational results that are achieved in Europe by the age of eighteen. What we need most is not to be continually reminded of this unpleasant fact, but to be shown specifically how the time may be saved. What we need is detailed accounts of how the problem is being solved in various places in the country; for example, how Superintendent Morrison of New Hampshire and other New England educational leaders, beginning with a *nine*-year elementary course instead of one of eight years, have instituted almost marvelous economies in a few years, so that they are well on the way to a ten-year course for the combined elementary- and high-school periods. Similarly we might be informed in detail how some of the Texas schools get along with a seven-year elementary course and a four-year high-school course. Educational progress is best stimulated by actual object-lessons showing how the suggested innovations are actually administered.

The discussion in the report of economy in elementary education, by Superintendent Van Sickle, may be contrasted with the general theoretical character of the report. Thus he tells us in the following paragraph that the needed reforms for brighter children have been already accomplished in certain places.

> One of the conspicuous causes of waste in elementary education is the attempt to give the same preparation to all, regardless of wide differences in aptitude and the character of the life to be led. Classifying the grades above the sixth as secondary will facilitate a differentiation in the upper grades which will permit some pupils to make more direct preparation for business or the industries than is now possible while others continue to follow the more strictly academic program as far as may be necessary in preparation for managerial positions or professional life. Without accurate and detailed accounts of the results of actual trial under such an organization, positive

assertions as to economy of time could not be made, yet the probability that time would thus be saved would seem strong. But enough communities have made progress in this important field to place the matter beyond the stage of mere probability. Worcester, Indianapolis, Baltimore, Lincoln, Harrisburg, and Rochester, by maintaining special classes for exceptionally capable children, have shown that it is possible for able pupils to save one year between the sixth grade and the twelfth, with other advantages to themselves besides the saving of time.

Similarly Superintendent Van Sickle makes reference to the report of the Cleveland six-year course of study and quotes a part of its schedule of standards of achievement.

Moreover, he emphasizes the crux of the administrative situation in securing economy in his discussion of the importance of the principal, in the following words:

It is upon the principal that large responsibility for improvement must be placed; so in a certain sense we are justified in modifying the well-known expression, "the teacher is the school," and in saying instead, "the principal is the school." The right kind of a principal will help weed out poor teachers, will make teachers of uncertain value into good teachers, and good teachers into better teachers. One prominent cause of waste in elementary education is the existence of inertia among school principals. Soon after the position is secured there comes a tendency to settle down into an easy routine. This tendency the superintendent, county or city, must counteract, if the waste under the heading "poor teaching" is to be materially lessened. What a laboratory a school principal has, and what an opportunity for the study of educational problems! No university possesses equal facilities in this field. The principal needs to feel more keenly his responsibility as a supervisor, but responsibility is not real unless coupled with a large degree of freedom. How to secure the amount of individual initiative that is desirable in principals and teachers without impairing the unity of the school system is an important problem in school administration. Teachers associated with routine principals are apt to become routine teachers, while, on the other hand, an alert and professional-minded principal always inspires his teachers with zeal. In considering waste in education, therefore, no problem looms up larger than the preliminary and after-training of suitable principals. Given a salary that will enable the superintendent to select persons of tested strength and character for these positions, no effort is expended to better advantage in checking waste than that which the superintendent devotes to conferences with his principals. The principal can either make or mar the most carefully planned scheme, and in his hands rests the success or failure of any plans that may be formulated for economizing time in elementary education.

Professional standards for teachers were advanced very materially in Illinois by a greatly improved certification law passed at the last legislature. One immediate effect of the law is seen in the organization of extension courses for teachers in some of the cities, in order to enable teachers who have not had professional training to take courses that will enable them to meet the requirements of the new law. Springfield and Joliet are among the most active cities in organizing such extension courses. In Springfield the instructors are secured from the state university and in Joliet from one of the state normal schools. The new law will probably also have the effect of sending many more Illinois teachers or prospective teachers to summer schools.

Increased Professional Requirements Encourage Extension Courses for Teachers

Similar experimentation in organizing extension courses for teachers is under way in Ann Arbor, Mich. In this case the instructors are also secured from the state university. While only 120 were enrolled there by October 18 and the superintendent was disappointed in the numbers, the experiment ought to succeed if any professional premium is placed upon the taking of the courses. The success of such work in cities where there are local universities to furnish the instructors would indicate that it ought to succeed eventually in centers where the instructors need to be imported from neighboring institutions.

One of the most pressing needs in the administration of public-school systems is an objective scheme for grading the efficiency of teachers. If a teacher's record of efficiency can be secured without depending upon the extremely valuable personal opinion of supervisors, and the teacher can be shown in black and white how her efficiency compares with others in the system, the supervisor or principal need not be afraid of being perfectly open and frank in discussing with the teachers his reports to the superintendent on their efficiency. In New Orleans Superintendent Gwinn is working in the direction of such publicity, as shown in the following report from the *New Orleans Picayune:*

Objective Supervisory Tests Needed

"If a teacher is rated as of low efficiency by the principal, she has a right to know why," was the statement made by Superintendent Gwinn at yesterday's meeting of third-, fourth-, and fifth-grade teachers. "Can a teacher request to see the report turned in by a principal as to her rating in efficiency?" he was asked. "She certainly can," admitted Mr. Gwinn. "In fact, the objects of the report would be lost if a teacher could not know in what she was deficient. The rule specifically states, however, that the representations to the board, on the teacher's efficiency, and consequent rating in salary, must be made by the superintendent."

S. C. P.

Professional Work in the Louisville Schools

The latest development in the elementary schools of Louisville, where so much progress has been made during the past two years, is the establishment of a prevocational class in the Seventeenth and Madison Street school.

The three lines of industrial work introduced thus far are printing, bookbinding, and woodworking.

The time is divided equally between the industrial work and the book subjects, or so-called "academic work." This latter has been carefully correlated with the shop problems, the teacher in charge of it, Miss Ethel M. Lovell, having spent several weeks in studying the scope of prevocational work and in visiting the printing plants and binderies of Louisville. She states that the opinion of the practical men was that the vitalized academic work is of greatest importance. She says also that from the teacher's point of view it is most interesting and encouraging to "watch the children as they grasp the 'reason' for things," that is, for their formal school studies. "Our library," she says, "is growing and our little librarian solemnly checks off books after school for the waiting children."

Mr. Louis A. Bacon, head of the industrial department of the school and director of manual training for the city, says that one of the great advantages of the school is that the work itself holds the children because they like it. One reason for this is that the work is made intensely practical and that the time element is emphasized.

Although in the early weeks of its existence, the school has attracted much public interest and appreciative comment.

One circumstance which ought to contribute to the success of the printing class is that the Typographical Union of Louisville

has recently adopted a rule making graduation from the elementary school a condition of apprenticeship in the printing trade. This is another indication of the possibility of improving our schools by means of co-operation with trade and business organizations.

Vocational Bureau to Be Formed for Philadelphia Schools

Two years ago the Public Educational Association of Philadelphia outlined plans for developing a department of vocational guidance in the public schools. This was done after their investigation and report on the economic conditions relating to children entering the business and industrial world between fourteen and sixteen years of age which was so ably presented in Mr. James S. Hiatt's article, "The Child, the School, and the Job."

The plan has had more recently the approval of Dr. Martin G. Brumbaugh, superintendent of schools, and finally of a special subcommittee on the Committee on Elementary Schools of the Board of Public Education. Dr. Brumbaugh says:

> Society suffers, particularly in the economic world, by reason of the fact that in America the transition from school life to a wage-earning relation to society is sudden, sharp, and abrupt. Whatever the school has done for the child it suddenly ceases to do, and the next day he must begin the struggle for bread.
>
> We have endeavored for some time to find means of establishing a vocational bureau as part of our public-school obligation to society. The purpose of this bureau would be to know (1) the capabilities and aptitudes of the pupils at the time they leave school; (2) the form of training they have had in school; and (3) the types of industrial occupations promising the largest return for good to the individual. This later phase of equipment would carry with it a knowledge of the several employers of labor, to the end that only those who endeavor to deal fairly and helpfully by their employees should be allowed to receive the assistance of the bureau.

The Committee on Elementary Schools has unanimously agreed to the creation of a Department of Vocational Education and Guidance and submitted to the Board of Public Education the following resolution, which has been adopted:

> *Resolved*, That a new department in the office of the superintendent be and is hereby created, to be known and designated as the Department of "Vocational Education and Guidance" and that a director for this department together with two clerical assistants be elected in conformity with the rules of the Board of Public Education, said director to be paid a salary not to exceed

four thousand dollars ($4,000) per year; and to have general supervision over all vocational activities for boys in the elementary schools; to secure definite articulation of said work and correlate it with the manual-training work in the high schools for boys; to organize and direct a bureau of vocational guidance for all pupils leaving the public schools and to have the same general relation to the superintendent as now pertains to other directors of special branches.

A New Idea in Vocational Work

A clipping from the editorial page of the *Union*, published in Ft. Atkinson, Wis., says that "vocational work took an advance step in a new direction in Wisconsin last summer." The movement came through the initiative of the boys of the manual-training department of the Waukesha high school. The students organized a co-operative manufacturing establishment, and with the advisory help of the superintendent of city schools rented the manual-training rooms for the summer months.

The work consisted of the manufacture and sale of mission furniture, the building of coal sheds, chicken coops, farmers' gates, and such articles. The boys paid for all their material, paid rent for the school plant, and still made a profit for themselves.

If the work was done faithfully, as it must have been, judging from the results, the boys should have some high-school credit for this work. If they do not get credit there are still three distinct advantages to be gained from such work. First, it gave the boys experience in work approaching real labor conditions which they are to meet in life. Second, it will develop, in some of them at least, the power of initiative, a very essential thing in those who are to make much progress in industrial life. And lastly, it may help to show teachers and school boards that manual training may be made intensely practical and at the same time be less a burden on the financial resources of the school. F. M. L.

The Newburgh Survey

Our cities are coming to realize that there are other functions which they may well perform outside of the individualistic production and distribution of commodities. They are coming to understand the possibility of an efficient and sufficient production and an equitable distribution of human welfare to all elements of the city population.

The first labor that suggests itself after this realization develops is taking stock of all the human welfare assets and liabilities possessed by the city. Then there must be a consideration of the effectiveness with which the assets are employed, and an equally careful study of the success in warding off the harmful effects of the social liabilities. This stock-taking is coming to be called the city survey. One of the latest published instances is that of Newburgh, N.Y., a city of some 30,000 inhabitants.

This survey was a community undertaking, initiated entirely by the citizens. On the survey committee were representatives appointed by the Chamber of Commerce, Merchants' Association, Central Labor Union, Ministerial Association, and the Associated Charities. The survey covered schools, public health, housing, delinquency, public library, recreation, charities, industrial conditions, and municipal administration. The survey was made by specialists from the Russell Sage Foundation, and the report is published as one of their bulletins.

In examining into the situation as regards the schools they pursue the excellent plan of comparing the various aspects of the Newburgh schools with those of the other cities of similar size in the state, or with the absolute standards set up by the office of the State Commission of Education. Things studied in this fashion are: school expenditures per pupil; adequacy of buildings and equipment in the matters of lighting, cubic feet of air space per pupil, sanitaries, school desks, washing facilities, wardrobes and lockers, fire-escapes, heating; the division of administrative functions between school board and superintendent; the teaching force as regards salaries, system of appointment, ratings, stimulation to effort, and supervision. The city is compared with the rest of the group as to the presence or absence of the following provisions, to the discredit of Newburgh in all cases but one: half-yearly promotions, supervisor of physical training, medical training, school doctor or nurse, supervisor of penmanship, domestic science, school yards used for playgrounds, class for backward children, class for truants and incorrigibles, kindergartens, evening schools, open-air classes, industrial education, and the social use of the school buildings.

The survey of the schools is very slight as compared with what the city superintendent ought himself to make and publish in his annual report to the community. Where conditions are unsatisfactory, however, due to the school board rather than to the superintendent, under present conditions, there is sometimes for obvious reasons a decided advantage in having the work done by some disinterested outside agency.

A more complete survey of a school system has recently been made in Portland, Ore. This city has grown large; but the form and methods of the school organization remain the same as when Portland was but a rural village. As a result, the city has to use the same textbooks as the rural schools, although many are entirely unsuitable; taxes are still voted in town meeting, though the method is an impossible one for a large city; the Board of School Directors is still unduly powerful in the control of matters that rightly belong to the professional experts. Owing to this lack of professional initiative, the curriculum has failed to grow and keep pace with the demands of modern progress. Full recommendations are made for remedying these maladjustments. J. F. B.

Rural Life and the Rural School

The decrease and change in the nature of rural population is constantly introducing further complications in the rural school problem. In a "Social and Economic Survey of a Rural Township in Southern Minnesota," Thompson and Warber show that the township population is composed as follows: American, 11 per cent; German, 30.8 per cent; Norwegian, 24.2 per cent; mixed, 21.3 per cent; English, 5.8 per cent; Irish 3.7 per cent; and Swedish 2.9 per cent. Although the foreign population in rural districts in general is increasing in many regions, the total rural population is decreasing. Iowa had fewer people in 1910 than in 1900, and the same statement would hold true for some other states, if the cities were left out of consideration.

During the time while this relative, and sometimes actual, decrease of population has taken place, it is commonly known that there has been a great increase in rural wealth. In the survey in Minnesota it is shown that the township investigated had in

1860 a lands and buildings valuation of $985,955 and in 1910 a valuation of $19,504,914. Farm machinery in 1860 was valued at $59,971 and in 1910 at $727,941. Farm animals in 1860 were valued at $179,817 and in 1910 at $2,345,138. Other farm materials and products show similar increase in value.

It is a notable fact that rural school expenditures and rural school efficiency have not kept pace with the value of rural properties. The change in rural population and lack of advanced ideals of rural education are important factors in this situation. Consolidation of rural schools has been urged and has taken several forms. In some cases where there has been a decrease in the number of pupils in adjoining districts the pupils are brought together in one school, all being taught by one teacher with little or no increase in school efficiency. This is a means of keeping the school alive, but not necessarily a means of increasing its efficiency. In other cases several districts are consolidated and grade schools, sometimes high schools, established. Too often these are attempts to establish city schools in the country, but in some cases these schools are developing types of work that are fitted to rural life. It seems fairly clear that the rural education problem must be solved by the development of schools which shall consider the needs of rural life rather than city life. Many things are common to both kinds of schools, but rural life must be intellectualized through rural schools, as city life is through city schools. All over the United States this change in emphasis is now being recognized. Experimentation in the development of this new type of rural education is second to none in importance, for successful rural life is fundamental to the occupation upon which city people live.

Another phase of rural life is admirably set forth in Gill and Pinchot's book *The Country Church*, in which they present the results of a prolonged and careful study of the rural churches in Windsor County, Vt., and Tompkins County, N.Y. In many ways until recently the rural church has been the social center of rural life. In the two counties studied there has been a decline of rural population of 19 per cent in Windsor County between 1830 and 1910 and of 34 per cent in Tompkins County between 1840 and 1910. In Windsor County the church attendance of

Protestant persons has declined from 26 per cent in 1888 to 19 per cent in 1908; and in Tompkins County there has been over 5 per cent decrease in church attendance of Protestant rural population between 1890 and 1910. In Tompkins County there has been a decrease of Protestant rural population from 16,805 in 1890 to 13,743 in 1910. The salary, education, and efficiency of the rural preacher have declined and the rural church has well-nigh lost its place as a social center. The change in the nature of rural population helps to make the school the logical rural social center. Difference in religious views, or absence of positive religious views, makes it unlikely that churches can gather together all the persons of one community. Common educational interests if aroused should enable the country school to serve as a social center. Many attempts are under way to make the school an instrument for securing a social unification of the community. O. W. C.

The Gary Schools

At the request of the Board of Education of the Gary public schools the announcement is made that visitors who wish to see the school system are asked to time their visits so as to come within the weeks of March 16 to 20, June 8 to 12, and July 27 to 31. The fact that the Board has found it necessary to restrict the time of visiting to these weeks when especial attention will be given to visitors is a result of the very great interest which the innovations made in the schools at Gary have awakened.

Scientific Experimentation by Teachers

A notice in the *Zeitschrift für pädagogische Psychologie und experimentelle Pädagogik* reports that the Swiss Association of Teachers has decided to undertake systematic experimentation in the field of experimental pedagogy. A number of European teachers' associations have undertaken work of this character in the past. The Teachers' Association of Leipzig, for example, has for a number of years maintained a laboratory for research and a series of lecture courses under the expert direction of Dr. Brahn, of the University of Leipzig. Teachers in Berlin, Breslau, Dresden, and Stuttgart have also carried on work of this nature. So far as the writer is

aware, no such systematic, organized effort to maintain scientific research in the field of education has been undertaken by bodies of teachers in the United States. Large associations have from time to time discussed or maintained researches of a less comprehensive nature. Such efforts as this may serve as a stimulus to educators in the United States.

Regularity of Attendance and Promotion

A study made under the auspices of the Committee on School Inquiry of New York brings out clearly one of the factors in the rate of promotion of children. This study is reported in a bulletin of the Public Education Association of New York. It shows that 17.10 per cent of the children between the ages of seven and fourteen were absent from school from eleven to twenty days in a term of a half-year, that 6.63 per cent were absent from twenty-one to thirty days, that 3.12 per cent were absent from thirty-one to forty days, and that 4.10 per cent were absent forty-one days and above. The significance of these results may be seen from the following quotation:

> Nearly one-half of the pupils who failed of promotion were absent over two-fifths of the school term, and 70 per cent were absent from school at least thirty days during the half-year. These data, furthermore, took account only of the pupils who failed of promotion on June 30; the 70,000 children who left school during the year being disregarded.

The report then discusses at length the need for more efficient organization for the purpose of reducing this large amount of non-attendance. This study confirms the results of less extensive investigation upon the importance of regularity in attendance for the advancement of the child through the school.

F. N. F.

LITERATURE IN THE ELEMENTARY CURRICULUM

J. F. BOBBITT, A. C. BOYCE, AND M. L. PERKINS
University of Chicago

In what school grade should any given piece of literature be read? Obviously, it ought to be used in that grade where, as shown by practical experience, it works best. Our questions can therefore be asked in terms of practical experience: Into what school grade has any given piece of literature tended to gravitate in the country-wide "trial-and-error" experimentation that is going on? By examining the courses of study used in the various cities and states, it is possible to locate the grade in which the given piece is most frequently used at the present time. This is the best evidence that we can now have as to where it belongs.

It must be remembered, however, that the experimentation is not ended. Certain pieces have got their present position through tradition and custom, and have not fully gravitated to the place where they belong. Others have found their place in the curriculum as the result of special systems of educational thought; these in many cases will be shifted as the systems of thought are modified or discarded. Notwithstanding these and other similar disturbing factors, it can still be safely said that the consensus of experience in the country, as shown by a full tabulation of courses of study, is the surest authority as to the rightful position in the elementary school of any particular literary selection.

The present study was undertaken for the purpose of ascertaining what readings were used in the elementary schools of the United States and in what grades. Our supply of printed courses was incomplete. Of those at hand, very many suggested only the general lines of work, and apparently left to principals and teachers a large amount of freedom in the selection. It was possible, however, to select fifty printed courses which presented reasonably full statements as to what was to be read and the grade in which it was to be used. Of these, thirty-six were of cities, among which were to be found New York City, Boston, Washington, D.C., Cin-

cinnati, Minneapolis, Detroit, Tacoma, and San Francisco. Fourteen were state courses representing states in all portions of the country, from Massachusetts and New York on the Atlantic seaboard to Washington on the Pacific side. It is believed that the consensus of these fifty courses will approximate the results which would be obtained were it possible to know what is being done in every city and state.

The inaccuracy with which printed courses of study represent the work actually done is sufficiently well known. Still, it is believed that the readings most often recommended in the printed courses are the ones most often to be found in actual practice; and those least often referred to in the courses are the ones that will least often be used in practice. Our aim, therefore, under the circumstances, is to show accurately the relative frequencies of recommendations as an approximate index of the relative frequencies of use. Our aim is relative emphasis, not absolute number. It is believed that the tabulations fairly present relative emphases.

The following lists include only the longer readings—books, long stories, and the longer poems. Short stories and poems have been tabulated separately and conclusions concerning these will be published in a later issue.

In the first of the following lists, the readings are alphabetical, by authors. In the original tabulation of the fifty courses, 138 authors, represented by 296 titles, were found. Obviously a book that occurred but once or twice in the fifty courses, however, represented special circumstances; and in tabulating consensus of practice, it could well be omitted from the list. The 113 titles that occurred only one, two, or three times have been eliminated. The list as given below includes the 183 titles that are recommended four or more times in the fifty courses.

The number of times a title was recommended in the fifty courses is stated in the first tabular column. The second column represents the grade for which the piece was most often recommended. In case a title was recommended equally often for two grades, the figure chosen was the one that lay nearest the majority-practice, as shown by the entire array of recommendations. The third column shows the range of grades for which the title is recommended in the fifty courses of study.

GENERAL LIST

Author	Title	Times Recommended	Grade	Range of Recommendations
Anonymous	*Arabian Nights*	22	6	1–8
Aanrud	*Lizbeth Longfrock*	5	4	3–7
Abbott	*Boy on the Farm*	5	4	3–5
Aesop	*Fables*	18	4	1–8
Alcott	*Eight Cousins*	6	5	4–8
	Jack and Jill	4	6	5–6
	Little Men	17	6	3–8
	Little Women	18	5	3–8
	Old-Fashioned Girl	7	7	5–8
	Under the Lilacs	9	6	3–6
Aldrich	*Story of a Bad Boy*	12	6	4–8
Amicis	*Cuore*	4	5	5–8
Andersen	*Fairy Tales*	28	4	1–6
	Ugly Duckling	4	1	1–5
Andrews, G.	*Each and All*	11	4	2–5
	Seven Little Sisters	23	3	1–4
	Ten Boys	15	5	3–6
Andrews, M. R. S.	*Perfect Tribute*	4	.....	7–8
Arnold	*Sohrab and Rustum*	4	8	7–8
Baldwin	*Discovery of the Old Northwest*	6	7	5–8
	Fairy Stories and Fables	13	3	1–4
	Fifty Famous Stories Retold	30	4	3–7
	Hero Stories Told in School	5	5	5
	Old Greek Stories	24	4	1–7
	Story of Roland	9	7	5–7
	Story of Siegfried	13	7	4–7
	Thirty More Famous Stories	9	4	3–6
Beckwith	*In Mythland*	8	3	1–4
Bennett	*Master Skylark*	4	7	7–8
Brooks	*Stories of the Red Children*	6	2	1–4
Brown, A. F.	*In the Days of Giants*	12	5	1–6
Brown, G.	*Rab and His Friends*	15	4	2–8
Browning	*Pied Piper of Hamelin*	11	3	2–7
Bunyan	*Pilgrim's Progress*	9	7	4–8
Burnett	*Little Lord Fauntleroy*	14	5	3–7
Burroughs	*Birds and Bees*	18	7	6–8
	Sharp Eyes	11	7	6–8
	Squirrels and Other Fur Bearers	10	6	5–8
Carpenter	*Africa*	7	6	4–7
	Asia	9	5	4–7
	Australia	7	6	4–7
	Europe	9	6	4–7
	How We Are Clothed	5	6	4–8
	How We Are Fed	6	8	4–8
	North America	9	5	4–6
	South America	7	6	4–7
Carroll	*Alice in Wonderland*	27	4	3–7
	Through the Looking Glass	9	5	4–7
Carter	*Story of Brave Dogs*	5	4	3–5
Church	*Story of the "Iliad"*	8	5	4–8
	Story of the "Odyssey"	9	5	3–8

GENERAL LIST—*Continued*

Author	Title	Times Recommended	Grade	Range of Recommendations
Clarke	*Story of Ulysses*	9	5	3–6
	Story of Troy	4	5	4–6
Clemens	*The Prince and the Pauper*	10	7	5–8
	Tom Sawyer	6	7	6–8
Collodi	*Pinocchio*	9	4	1–7
Cooke	*Nature Myths and Stories*	5	2	1–3
Coolidge	*How the Leaves Come Down*	4	2	2–3
Cooper	*Deerslayer*	7	7	5–7
	Last of the Mohicans	17	7	6–8
	The Spy	13	7	6–8
Craik (Mulock)	*Adventures of a Brownie*	21	4	2–6
	Little Lame Prince	17	3	2–6
Craik	*Bow-wow and Mew-mew*	6	2	1–2
Dana	*Two Years Before the Mast*	11	7	6–8
Defoe	*Robinson Crusoe*	29	4	1–7
Dickens	*Christmas Carol*	25	7	3–8
	Cricket on the Hearth	14	8	6–8
	David Copperfield	11	7	5–8
Dodge	*Donald and Dorothy*	5	5	3–7
	Hans Brinker	19	6	4–8
Dopp	*Early Cave Men*	8	3	1–6
	Tree Dwellers	7	3	1–6
Du Chaillu	*The Land of the Long Night*	4	7	6–7
Dutton	*In Field and Pasture*	5	3	1–3
Eddy	*Friends and Helpers*	7	4	3–5
Eggleston	*First Book in American History*	8	5	4–6
	Hoosier School Boy	11	6	3–8
	Hoosier School Master	5	7	5–8
	Stories of American Life and Adventure	7	4	3–6
	Stories of Great Americans for Little Americans	13	3	3–4
Eliot	*Silas Marner*	8	8	8
Ewing	*Jackanapes*	11	5	3–6
Franklin	*Autobiography*	12	7	5–8
Frost	*Court of King Arthur*	5	6	5–7
Goldsmith	*Deserted Village*	7	8	7–8
Grimm	*Fairy Tales* (for young children)	16	1	1–4
	Household Stories	6	3	3–4
Grover	*Overall Boys*	7	1	1–2
	Sunbonnet Babies	8	1	1–2
Guerber	*Story of the English*	7	6	6–8
	Story of the Greeks	6	6	5–8
	Story of the Romans	8	6	5–9
Hale, L. P	*Peterkin Papers*	5	5	2–5
Hale, E. E.	*The Man Without a Country*	31	8	6–8
Hall	*Four Old Greeks*	4	5	3–5
Harris	*Uncle Remus*	12	5	1–7
Hawthorne	*Grandfather's Chair*	11	7	6–8
	Snow Image	5	7	3–7
	Tanglewood Tales	22	5	1–7
	The Great Stone Face	12	7	4–8

GENERAL LIST—*Continued*

Author	Title	Times Recommended	Grade	Range of Recommendations
Hawthorne (*cont.*)	*Twice-Told Tales*	6	6	6–8
	Wonder Book	27	5	3–7
Holbrook	*Nature Myths*	11	2	1–5
Hopkins	*Sandman*	4	3	1–3
Hughes	*Tom Brown at Rugby*	6	7	6–8
	Tom Brown's School Days	13	8	4–8
Irving	*Alhambra*	5	8	7–8
	Rip Van Winkle	16	6	2–8
	Sketch Book	19	7	6–8
	The Legend of Sleepy Hollow	11	7	5–8
Johonnot	*Ten Great Events in History*	5	8	6–8
Kingsley	*Greek Heroes*	11	5	5–7
	Water Babies	17	4	3–6
	Westward Ho!	4	7	6–8
Kipling	*Captains Courageous*	11	7	6–8
	Jungle Books 1 and 2	20	5	2–7
	Just-so Stories	17	5	1–8
Lamb	*Adventures of Ulysses*	7	6	6–8
	Tales from Shakespeare	28	7	5–8
Lang	*Blue Fairy Book*	4	1	1–4
Lear	*Nonsense Songs and Stories*	4	3	1–6
Long	*Secrets of the Woods*	6	5	5–7
	Wilderness Ways	12	5	3–7
Longfellow	*Evangeline*	23	7	5–8
	Hiawatha	27	2	1–6
	Miles Standish	23	7	5–8
	Tales of a Wayside Inn	8	7	6–9
Lowell	*Vision of Sir Launfal*	13	8	7–8
Mabie	*Norse Stories Retold from the Eddas*	16	5	2–8
Macaulay	*Horatius at the Bridge*	11	7	4–8
McDonald	*At the Back of the North Wind*	5	5	3–7
McMurry	*Classic Stories*	6	2	1–3
Monroe	*Flamingo Feather*	5	5	5–8
Nicolay	*Boy's Life of Abraham Lincoln*	4	8	4–8
Otis (pseud.)	*Toby Tyler*	7	4	3–6
Page	*Two Little Confederates*	9	5	3–8
Parkman	*Oregon Trail*	5	8	5–8
Pratt	*Legends of Norseland*	4	5	5–7
	Legends of the Red Children	10	3	1–4
Pyle	*Men of Iron*	4	7	6–7
	Merry Adventures of Robin Hood	17	5	4–8
	Story of King Arthur and His Knights	11	5	4–8
Radford	*King Arthur and His Knights*	14	6	4–8
Ramée	*Moufflon*	6	4	1–5
Rice	*Mrs. Wiggs of the Cabbage Patch*	4	8	6–8
Ruskin	*King of the Golden River*	30	5	3–7
Schwatka	*Children of the Cold*	6	5	3–6
Scott	*Ivanhoe*	14	8	6–9
	Kenilworth	7	8	6–8
	Lady of the Lake	20	8	6–9
	Lay of the Last Minstrel	4	.....	7–8

GENERAL LIST—*Concluded*

Author	Title	Times Recommended	Grade	Range of Recommendations
Scudder	*Book of Legends*	5	4	3–5
	Fables, Folk Stories and Legends	15	3	1–4
Seton	*Lives of the Hunted*	9	5	4–6
	Lobo, Rag and Vixen	9	5	4–6
	Wild Animals I Have Known	18	5	1–7
Sewell	*Black Beauty*	31	5	3–8
Shakespeare	*Julius Caesar*	18	8	6–9
	Merchant of Venice	14	8	8–9
Shaw, C.	*Story of the Ancient Greeks*	4	6	6–8
Shaw, E. R.	*Big and Little People of Other Lands*	11	3	2–4
Smith	*Eskimo Stories*	8	2	1–3
Snedden	*Docas, the Indian Boy*	9	4	3–6
Spyri	*Heidi*	15	6	3–6
	Moni, the Goat Boy	8	5	4–6
Stevenson	*Child's Garden of Verses*	14	3	1–7
	Kidnapped	6	8	7–8
	Treasure Island	17	8	3–8
Stockton	*Fanciful Tales*	19	5	1–6
Stoddard	*Little Smoke*	5	5	3–6
Stowe	*Uncle Tom's Cabin*	10	8	6–8
Swift	*Gulliver's Travels*	14	6	4–8
Tennyson	*Idylls of the King*	4	8	8
Thaxter	*Madame Arachne*	4	3	2–4
Turpin	*Classic Fables*	4	3	1–3
Van Bergen	*Story of China*	5	7	6–8
Van Dyke	*First Christmas Tree*	4	6	6–8
Waterloo	*Story of Ab*	6	1	1–8
Whittier	*Snow-Bound*	24	7	6–8
Wiggin	*Birds' Christmas Carol*	23	4	1–8
	Rebecca of Sunnybrook Farm	7	8	5–8
	Story of Patsy	7	8	2–8
Wiltse	*Folklore Stories and Proverbs*	5	2	1–3
Wyss	*Swiss Family Robinson*	23	5	3–7

No school can use all this list of 183 titles. Selection must be made. One must not blindly follow consensus of practice. But in this field, at least, it is the safest single guide. The second list shows the selections most frequently used in each grade, in the order of their frequency.

SELECTED LIST OF TITLES IN ELEMENTARY SCHOOL LITERATURE

INCLUDING THOSE APPEARING NINE TIMES OR MORE IN THE COURSES STUDIED

	Title	No. Times Recommended	Most Frequent Grade	Range of Grades
GRADE I—				
Grimm	*Fairy Tales* (for young children)	16	1	1–4
GRADE II—				
Longfellow	*Hiawatha*	27	2	1–6
Holbrook	*Nature Myths*	11	2	1–5
GRADE III—				
Andrews	*Seven Little Sisters*	23	3	1–4
Craik	*Little Lame Prince*	17	3	2–6
Scudder	*Fables, Folk Stories and Legends*	15	3	1–4
Stevenson	*Child's Garden of Verses*	14	3	1–7
Baldwin	*Fairy Stories and Fables*	13	3	1–4
Eggleston	*Stories of Great Americans for Little Americans*	13	3	3–4
Browning	*Pied Piper of Hamelin*	11	3	2–7
Shaw	*Big and Little People of Other Lands*	11	3	2–4
Pratt	*Legends of the Red Children*	10	3	1–4
GRADE IV—				
Baldwin	*Fifty Famous Stories Retold*	30	4	3–7
Defoe	*Robinson Crusoe*	29	4	1–7
Andersen	*Fairy Tales*	28	4	1–6
Carroll	*Alice in Wonderland*	27	4	3–7
Baldwin	*Old Greek Stories*	24	4	1–7
Wiggin	*Birds' Christmas Carol*	23	4	1–8
Craik	*Adventures of a Brownie*	21	4	2–6
Aesop	*Fables*	18	4	1–8
Kingsley	*Water Babies*	17	4	3–6
Brown	*Rab and His Friends*	15	4	2–8
Andrews	*Each and All*	11	4	2–5
Baldwin	*Thirty More Famous Stories*	9	4	3–6
Collodi	*Pinocchio*	9	4	1–7
Snedden	*Docas, the Indian Boy*	9	4	3–6
GRADE V—				
Sewell	*Black Beauty*	31	5	3–8
Ruskin	*King of the Golden River*	30	5	3–7
Hawthorne	*Wonder Book*	27	5	3–7
Wyss	*Swiss Family Robinson*	23	5	3–7
Hawthorne	*Tanglewood Tales*	22	5	1–7
Kipling	*Jungle Books*	20	5	2–7
Stockton	*Fanciful Tales*	19	5	1–6
Alcott	*Little Women*	18	5	3–8
Seton	*Wild Animals I Have Known*	18	5	1–7
Kipling	*Just-so Stories*	17	5	1–8
Pyle	*Merry Adventures of Robin Hood*	17	5	4–8
Mabie	*Norse Stories Retold from Eddas*	16	5	2–8
Andrews	*Ten Boys*	15	5	3–6
Burnett	*Little Lord Fauntleroy*	14	5	3–7
Brown	*In the Days of Giants*	12	5	1–6
Harris	*Uncle Remus*	12	5	1–7
Long	*Wilderness Ways*	12	5	3–7
Ewing	*Jackanapes*	11	5	3–6

SELECTED LIST OF TITLES IN ELEMENTARY SCHOOL LITERATURE—*Continued*

	Title	No. Times Recommended	Most Frequent Grade	Range of Grades
Kingsley	*Greek Heroes*	11	5	5–7
Pyle	*Story of King Arthur and His Knights*	11	5	4–8
Carpenter	*North America*	9	5	4–6
	Asia	9	5	4–7
Carroll	*Through the Looking Glass*	9	5	4–7
Clarke	*Story of Ulysses*	9	5	3–6
Church	*Story of the "Odyssey"*	9	5	3–8
Page	*Two Little Confederates*	9	5	3–8
Seton	*Lobo, Rag and Vixen*	9	5	4–6
	Lives of the Hunted	9	5	4–6
GRADE VI—				
Anonymous	*Arabian Nights*	22	6	1–8
Dodge	*Hans Brinker*	19	6	4–8
Alcott	*Little Men*	17	6	3–8
Irving	*Rip Van Winkle*	16	6	2–8
Spyri	*Heidi*	15	6	3–6
Radford	*King Arthur and His Knights*	14	6	4–8
Swift	*Gulliver's Travels*	14	6	4–8
Aldrich	*Story of a Bad Boy*	12	6	4–8
Eggleston	*Hoosier School Boy*	11	6	3–8
Burroughs	*Squirrels and Other Fur Bearers*	10	6	5–8
Alcott	*Under the Lilacs*	9	6	3–6
Carpenter	*Europe*	9	6	4–7
GRADE VII—				
Lamb	*Tales from Shakespeare*	28	7	5–8
Dickens	*Christmas Carol*	25	7	3–8
Whittier	*Snow-Bound*	24	7	6–8
Longfellow	*Miles Standish*	23	7	5–8
	Evangeline	23	7	5–8
Irving	*Sketch Book*	19	7	6–8
Burroughs	*Birds and Bees*	18	7	6–8
Cooper	*Last of the Mohicans*	17	7	6–8
Baldwin	*Story of Siegfried*	13	7	4–7
Cooper	*The Spy*	13	7	6–8
Franklin	*Autobiography*	12	7	5–8
Hawthorne	*The Great Stone Face*	12	7	4–8
Burroughs	*Sharp Eyes*	11	7	6–8
Dickens	*David Copperfield*	11	7	5–8
Hawthorne	*Grandfather's Chair*	11	7	6–8
Irving	*The Legend of Sleepy Hollow*	11	7	5–8
Kipling	*Captains Courageous*	11	7	6–8
Macaulay	*Horatius at the Bridge*	11	7	4–8
Dana	*Two Years Before the Mast*	11	7	6–8
Clemens	*Prince and the Pauper*	10	7	5–8
Baldwin	*Story of Roland*	9	7	5–7
Bunyan	*Pilgrim's Progress*	9	7	4–8
GRADE VIII—				
Hale	*The Man Without a Country*	31	8	6–8
Scott	*Lady of the Lake*	20	8	6–9
Shakespeare	*Julius Caesar*	18	8	6–9
Stevenson	*Treasure Island*	17	8	3–8

SELECTED LIST OF TITLES IN ELEMENTARY SCHOOL LITERATURE—*Concluded*

	Title	No. Times Recommended	Most Frequent Grade	Range of Grades
Dickens	*Cricket on the Hearth*	14	8	6–8
Scott	*Ivanhoe*	14	8	6–9
Shakespeare	*Merchant of Venice*	14	8	8–9
Hughes	*Tom Brown's School Days*	13	8	4–8
Lowell	*Vision of Sir Launfal*	13	8	7–8
Stowe	*Uncle Tom's Cabin*	10	8	6–8

SOME PRACTICAL STUDIES OF HANDWRITING[1]

FRANK N. FREEMAN
University of Chicago

THE RELATION BETWEEN SPEED AND QUALITY

In an article in the *Journal of Educational Psychology* for 1912 the writer, in describing a number of problems in psychology and pedagogy of handwriting, emphasized the question of the relationship between the speed and the quality of writing. From investigations which have been made in connection with the School of Education and from some of the published articles from other sources, material can be gathered which bears upon this and other questions. The purpose of this article is to present such data as exist as a basis for certain tentative conclusions and as an incentive to further research on the same problems.

In order that the relationship of speed and quality might be set forth from as large variety of sources as possible, the results of a number of investigations have been brought together in Table I. Part of the figures of this table are borrowed from other sources, but they are put into new relationships. The table shows the average quality (which may be interpreted as legibility or as general merit), and the average speed for as many of the grades as have been reported upon or measured in the various investigations. The notes at the bottom of the table give the sources from which the figures were drawn.

In order that the averages representing the quality of writing might be made comparable, it was necessary to transmute the figures which were obtained by using the Thorndike and the Ayers scales into a common measure. This was done by using the Ayers scale as the basis and transmuting the results obtained with the Thorndike scale by multiplying the figures by five. This procedure is not entirely accurate. It presupposes that Grades 20 and 90 of the Ayers scale correspond with Grades 4 and 18

[1] The author acknowledges with thanks the assistance of Messrs. J. R. Young and R. M. Tryon in making many of the tabulations.

respectively of the Thorndike scale and that the intermediate grades correspond in like manner. It is probable that the Thorndike scale has a greater range than the Ayers scale and that therefore the lower figures obtained in this way will be too high and

TABLE I

THE QUALITY AND SPEED OF WRITING IN SEVERAL SCHOOL SYSTEMS

GRADE	QUALITY						SPEED					
	A	B	C	D	E	F	A	B	C	D	E	F
1B	46.0						22					
1					30.0						19.3	
1A	47.5					22	9					
2B	50.5					34	17					
2					37.0						33.1	
2A	52.0					37	14					
3B	49.5					41	20					
3		38.5			39.0			52.0			34.0	
3A	51.5					44	36					
4B	51.0			36.8		46	48			56.0		
4		42.5	38.0		43.0			82.1	62.4		40.2	
4A	50.0			43.4		48	60			75.0		
5B	51.0			42.0		44	51			64.0		
5		43.0	36.0		46.0			83.2	46.4		50.6	
5A	51.5			48.1		46	52			65.0		
6B	57.0			51.6		47	71			73.0		
6		49.0	46.6		49.0			114.9	77.3		61.6	
6A	58.5			53.7		50	60			71.0		
7B	57.0					54	58					
7			34.7	57.0	51.0				103.1	69.0	79.4	
7A	58.5					56	55					
8B	56.0					59	86					
8		63.0	49.4	52.3	52.0			71.4	80.2	71.5	84.8	
8A	55.0					58	74					

School A: Connersville, Ind., schools. Figures taken from Superintendent Wilson's report in *Elementary School Teacher*, Vol. XI (1911), 540–43 (Thorndike scale).

School B: Large city school (Thorndike scale).

School C: System of a town in Illinois (Ayers scale).

School D: University Elementary School (Ayers scale).

School E: Madison, Wis., schools. From report by D. Starch in *Journal of Educational Psychology*, IV (1913), 445–64 (Thorndike scale).

School F: Iowa City schools. From report of Irving King in *Journal of Educational Psychology*, III (1912), 514–20.

the upper figures too low, but since the majority of the figures are in the intermediate parts of the scale, this error is not of great consequence.

Another difficulty arises from the fact that the figures as to quality are obtained by different judges. No attempt has been made to determine exactly how much error is due to this fact.

Some allowance then must be made in the case of quality for chance error in comparing different school systems with one another. In the cases in which different grades of the same school or the same grades at different times are compared the determinations were made by the same judges.

In order to display the results in Table I graphically they are represented upon Chart I. The graphs upon the various charts are made comparable by introducing a line which may be taken to represent a tentative standard in quality and in speed. In order to interpret the charts from the point of view of quality the figures upon the left margin should be used. The figures in the right margin represent speed. Thus a single line may be used to represent both characteristics. For example, for Grade 1A the standard for quality found by reading from the left margin is 35 (upon the Ayers scale). The standard for speed represented by the same point and found by reading the right margin is 30 letters per minute. Similarly the standard for Grade 8A is 70 for quality and 100 for speed. The graphs upon the various charts then are compared with the same standard.

We may first compare the different relations between speed and quality which are found to obtain in the various schools and school systems. In some cases the speed is relatively above the quality, as, for example, in Schools B, C, and part of the grades in School D. In School A, on the other hand, the speed is relatively below quality, while in School E they run closely together. It is evident that some schools place much greater emphasis upon one of these characteristics in relation to the other than do others. Furthermore, in some schools the speed is not only above the quality with relation to the standard, but it is absolutely equal to or above the standard, whereas in others it is considerably below. The same remark holds true for quality except that it is above the standard only in the case of the first four grades of School A.

It further appears that there is variation in the time of the pupil's school life in which quality or speed is particularly emphasized. An example of the emphasis of quality at the expense of speed in the lower grades is seen in School A. A high standard of quality is maintained throughout the first five grades, whereas

CHART I

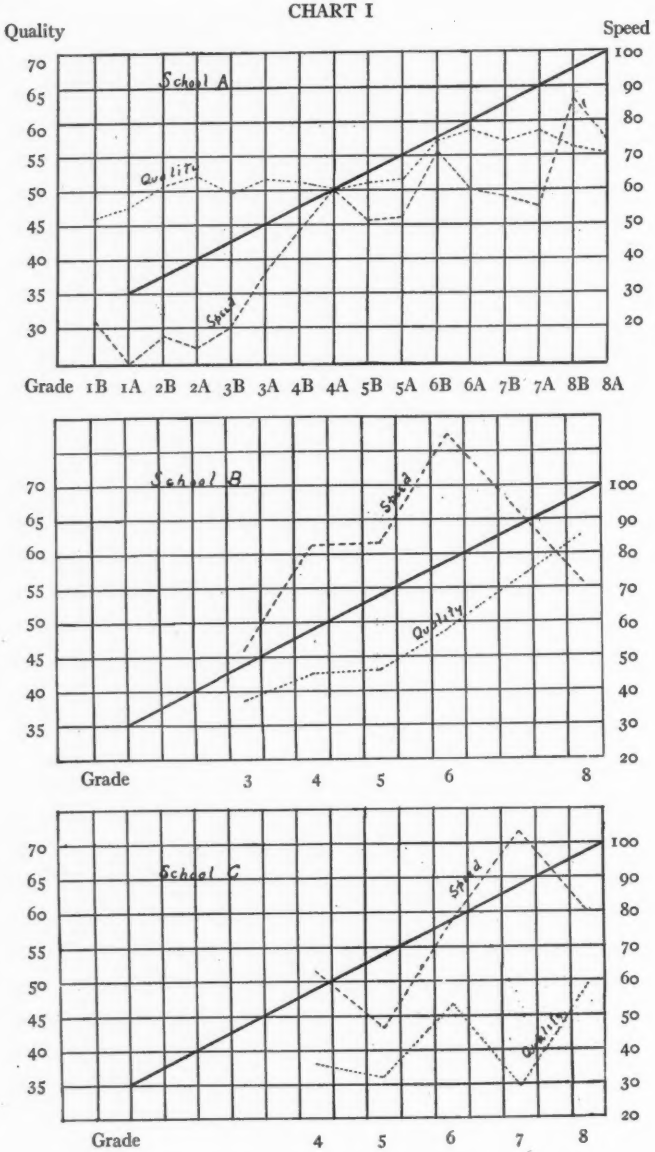
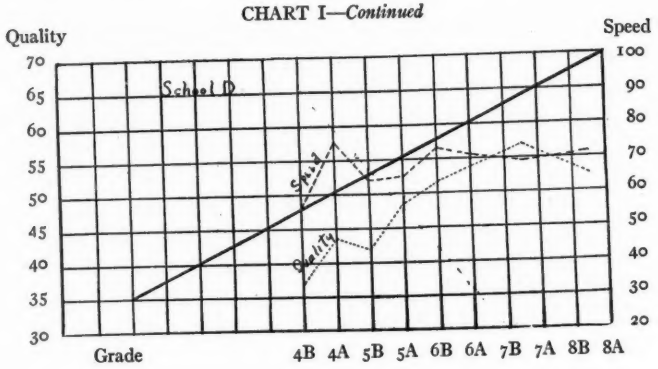
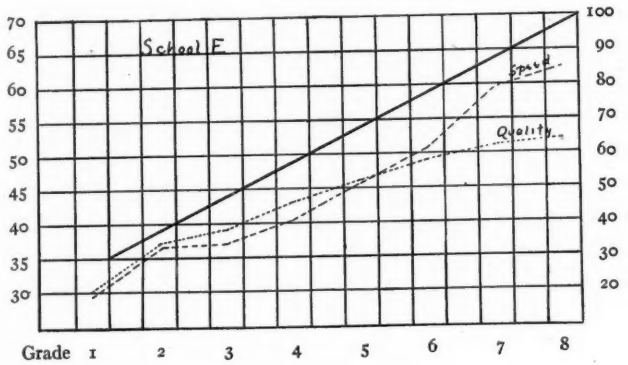
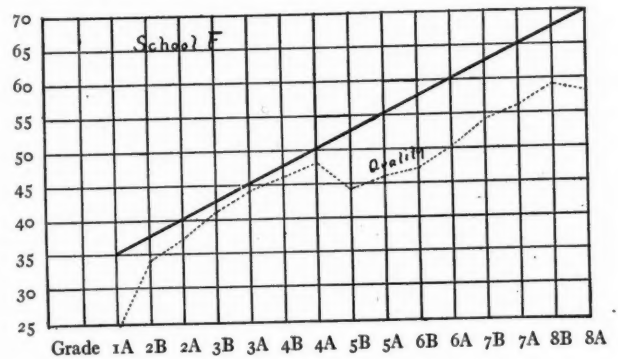

Quality
Speed
School A
Quality
Speed
70 65 60 55 50 45 40 35 30
100 90 80 70 60 50 40 30 20
Grade 1B 1A 2B 2A 3B 3A 4B 4A 5B 5A 6B 6A 7B 7A 8B 8A
School B
Speed
Quality
Grade 3 4 5 6 8
School C
Speed
Quality
Grade 4 5 6 7 8

CHART I—*Continued*







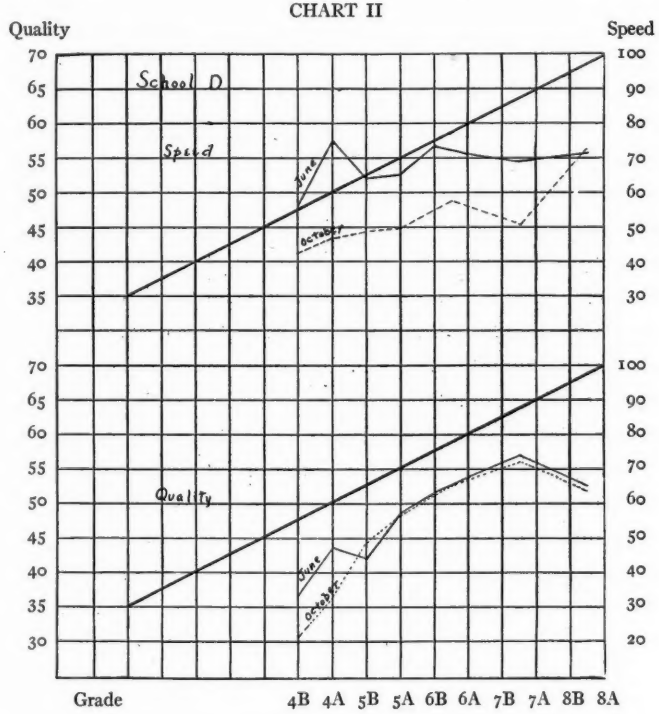
the speed in the lower grades is very low and only increases gradually. In School D, on the other hand, quality is inferior to speed in the lowest grades of which we have record and approaches it only in the upper grades. In School E, on the other hand, both speed and quality progress alike from the lowest to the highest grades.

A variation in the standard of attainment in these two characteristics, speed and quality, appears also in the different grades of the same school. A very striking example of this is seen in School C. In grade seven speed is emphasized so greatly that it exceeds the standard by 16 letters a minute, whereas the quality is inferior to the standard by nearly 30 points of the scale. In school B again in the sixth grade there is an extreme emphasis upon speed which raises it to 15 letters a minute beyond the standard for the eighth grade, whereas there is no corresponding variation in quality. Some differences in emphasis, which are not so extreme, may be found in Schools A, D, and E. Table IV and Chart II indicate further that the emphasis in the same grade varies from one part of the year to another.

The relationship between quality and speed may be studied in another way by requiring the pupils to write under three sorts of instructions: first, with instruction to write both rapidly and well; second, to write as well as possible; and third, to write as rapidly as possible. The writing obtained by the first instruction we may call the normal writing. The results from such an experiment are shown in Table II. The first columns under "Speed" and "Quality" represent the normal writing, the second column the writing which was to be done as well as possible, and the fourth column the rapid writing. The columns which are headed "Percentage of Difference" represent the effect of trying to write as well as possible and trying to write as rapidly as possible. It is clear from an inspection of the figures for each grade and of the averages at the bottom of the table that trying to write well improved the quality of the writing at the expense of speed, although the speed is decreased by only 3.7 per cent, while the quality is improved by 6.2 per cent. Trying to write as rapidly as possible, on the other hand, increased the speed by 27.2 per

cent at the expense of a loss in quality to the extent of 9.1 per cent. There is then a certain degree of inverse relationship between these two characteristics if we base our conclusions upon the averages. The same relations hold in varying degrees for

CHART II



each grade, but in some cases the increase in quality is accompanied by only a very slight decrease in speed or the increase in speed is accompanied by only a small decrease in quality. Some of the grades are able to improve their writing in one respect or the other with less sacrifice than are other grades. It follows then that an improvement in both respects is to be looked for where the teaching is efficient.

There is still another means of testing the relationship of these

two characteristics. We may compare the standing of different individuals in these two regards and determine whether or not there is correlation between them; that is, we may determine

TABLE II

COMPARISON OF THE QUALITY AND SPEED OF WRITING UNDER INSTRUCTIONS WHICH GIVE DIFFERENT EMPHASIS TO QUALITY AND SPEED

GRADE	QUALITY					SPEED				
	Normal	Well	Percentage of Difference	Rapid	Percentage of Difference from Normal	Normal	Well	Percentage of Difference	Rapid	Percentage of Difference from Normal
4B.....	37.6	39.7	+5.6	36.0	− 4.3	57.3	57.1	− .3	71.5	+24.8
4A.....	38.9	40.0	+2.8	36.6	− 5.9	55.3	55.1	− .4	64.3	+16.3
5B.....	36.8	40.0	+8.7	35.0	− 4.9	59.2	58.7	−2.5	68.0	+15.5
5A.....	50.8	53.6	+5.5	46.8	− 7.9	53.5	50.4	−5.8	78.8	+47.1
6.....	52.0	56.4	+8.5	41.7	−19.8	73.0	66.0	−9.6	89.6	+22.1
7.....	59.7	63.2	+5.9	56.5	− 5.4	65.0	63.8	−1.8	86.7	+33.4
8.....	52.3	55.6	+6.3	44.3	−15.3	71.5	67.5	−5.6	94.0	+31.5
Average			+6.2		− 9.1			−3.7		+27.2

whether a pupil who writes more rapidly than the average also writes better. The correlation between speed and quality was calculated for the children of School C and the results are given in Table III. It was, of course, necessary to calculate the correlation separately for each grade. As will be seen from the table,

TABLE III

CORRELATION BETWEEN SPEED AND QUALITY OF WRITING OF CHILDREN OF SCHOOL C

	Grade IV	V	VI	VII	VIII
Coefficient of correlation...	+.08(±.02)	−.10(±.04)	−.14(±.04)	−.34	−.15(±.05)

there is in all cases except that of Grade 4 a negative correlation between speed and quality. The coefficient for Grade 4 is so low as to be negligible. It appears then that there is some opposition between speed and quality so that some pupils emphasize the one and others the other characteristic. The practical con-

clusion would seem to be that different pupils require different sorts of teaching so as to lead to improvement in the feature of their writing in which they are weak.

STANDARDS OF ATTAINMENT IN HANDWRITING

The results which are presented in the charts before us make possible some consideration of the standards in speed and quality which should be attained in the various grades. A general form of standard may be arrived at by comparing the different grades within the same school. Barring special conditions, we should expect that the successive grades should show an improvement over those which preceded them. At least there is nothing in the results before us which indicate that there should be a drop in any particular grade. The possible exception is found in the fact that the fifth grade in all cases except that of School E does not show an improvement over the fourth grade. With this possible exception then we may take for granted the principle of progression. It is apparent that there are many exceptions to this principle. The most frequent exception appears in the low standard of the eighth grade. In many cases it is inferior to the seventh grade and in some cases to the sixth. In general, the upper grades do not progress as rapidly as the lower grades. For example, in School A there is very little progress after the fifth grade. In School C the progress is slight and very irregular. In School D there is practically no progress after the fifth grade.

Whether this fact is due to a decline in the teaching in the upper grades or to some more fundamental fact does not appear from the results, but the fact that there are exceptions to this rule, as, for instance, in the case of School E, particularly in speed, and in the case of Schools B and F in quality, would seem to indicate that the fault is due to teaching rather than to an inability of the pupils to progress farther. That this is the true interpretation is also indicated by the rapid progress which pupils in business courses make and by the degree of attainment far above that presented in these charts which they reach.

The lack of continued progress may be taken to indicate that there is not a due sense of the importance of training in hand-

writing. The other subjects of the curriculum tend to crowd out this one and under-emphasis upon it is further brought about by the low repute in which so-called drill subjects are held. It may be also that the pupils become less inclined to drill in handwriting as they reach the upper grades. Some new motive to good writing beyond the pleasure in drill and in improvement itself needs to be found. If attention were paid to the quality of the pupil's writing in the other subjects of the curriculum and if he were given a grade based upon his writing in these subjects, this motive would be furnished and the continuance of mechanical drill beyond a sufficient amount to retain what had been learned in the lower grades would be avoided.

A more particular question regarding standards relates to the degree of attainment which should be expected of the average of a class. Any standard which may be set up is bound to become in some degree arbitrary and variations according to particular conditions must be allowed, but the possession of a standard is of great importance as furnishing stimulus and as giving a basis for self-judgment on the part of the teacher and of judgment by supervising officers. In general, we may lay down the principle that the attainment of the best grades should furnish the standard instead of the average attainment. If the average attainment were used, the grades or schools which now exceed that standard would be content with poorer results than they attain unaided by any criterion. As a general principle, it is better for a standard to be too high rather than too low. If, for example, Grade 4A in School A can attain the tentative standard which we have laid down, why should the same grade of School E be content to remain below it, unless indeed undue time and energy are expended in handwriting in the first school? That this is the case there is no evidence.

The final determination of standards cannot be made without further investigation. It may be that the tentative standard here suggested will be modified both in the relative emphasis which it gives to speed and to quality and in the demands which are made in both of these characteristics. This determination can be made after we are satisfied that the best has been attained by a certain school or school system. It cannot be too often said

that it is this best which should serve as a standard, however, and not a mere average attainment.

THE IMPROVEMENT IN ONE SCHOOL THROUGHOUT THE YEAR

In School D tests were taken four times during the school year in order to find out what improvement was made and whether or not improvement was greater in certain grades in which special instruction was given. The results of this study are given in Table IV. The results for the October and the June tests are shown graphically in Chart II.

TABLE IV

THE QUALITY AND SPEED OF WRITING OF THE GRADES IN SCHOOL D FROM TESTS TAKEN AT DIFFERENT TIMES THROUGHOUT THE YEAR

	QUALITY					SPEED				
	October	December	March	June	Gain or Loss	October	December	March	June	Gain or Loss
3A	36.5	36.2	.....	.....	.....	36.5	41.6	.....	.....	.....
4B*	.....	*30.6*	*35.4*	*36.8*	+6.2	.....	*42.0*	*45.5*	*56.0*	+14.0
4A	**36.3**	**37.6**	**41.1**	**43.4**	+7.1	**46.5**	**57.3**	**67.5**	**75.0**	+28.5
5B	*44.1*	*38.9*	*40.0*	*42.0*	−2.1	*49.0*	*55.3*	*69.0*	*64.0*	+15.0
$5A^2$	46.6	36.8	39.9	49.0	+3.6	52.8	59.2	73.4	68.0	+16.0
$5A^1$	50.0	50.8	49.4	47.2	−2.8	47.0	53.5	61.1	62.0	+15.0
6C	.....	.....	51.6	53.7	.....	.....	.....	75.2	76.0	.....
6B	.....	.....	51.9	49.4	.....	.....	.....	71.2	70.0	.....
6A	.....	.....	49.5	53.7	.....	.....	.....	71.0	71.0	.....
All	52.8	52.0	51.0	52.3	−0.5	57.5	73.0	72.4	72.3	+14.8
7	56.0	59.7	53.4	57.0	+1.0	50.5	65.0	71.0	69.0	+18.5
8	51.9	52.3	.....	.....	+0.4	72.5	71.5	.....	.....	− 1.0

*In October and December the classes which now go by the names 4B to 5A were half a grade lower in each case. These pupils are represented in the table by their present rather than their former grade name.

It is apparent from the chart that the greatest improvement was made in speed, but that practically no improvement was made in quality except in Grades 4B and 4A. The reason for this lack of improvement in quality is not clear, unless it is due to the fact that the whole emphasis of the teaching was put upon speed. There was, however, no special instruction in writing given in Grades 6 to 8 and if this explanation is the correct one the emphasis must have been given incidentally in these grades. It is also possible that the sixth and seventh grades improved so greatly in speed because the children at the beginning of the year were

writing much more slowly than they were capable of. At any rate, the conclusion seems justified that it is easier to bring about improvement in speed than in quality without special training given in special handwriting lessons.

The grade in which the longest continued special training was given was 4A and it is noteworthy that this grade made the greatest improvement of all. In speed particularly it finally rose superior to every other grade in the school. At the same time the quality was raised from an inferior rank to one which was comparable to that of the other grades. Grades 4B, 5B, and 5A were also given special training, though only for half of the year. Two of these grades, on the whole, also made satisfactory progress, but Grade 5B showed the slump which was found above to be a general phenomenon. It is apparent that too great emphasis was placed upon speed in the teaching. Such a result can now be corrected on the basis of such an array of figures as these. If greater emphasis had been placed upon quality or if in the succeeding year these same grades are taught in such a way as to emphasize quality, their writing can undoubtedly be raised sufficiently to approach, if not equal, the tentative standard. There is no doubt, at least, that it can be brought to a higher degree of efficiency by the time these children reach the eighth grade than is possessed by the writing of the present eighth grade. If excellence in writing is worth while at all, then it certainly pays to set aside periods for it and to give particular attention to the methods of teaching it.

CONCLUSIONS

The main conclusions from the paper may briefly be summed up.

The belief that it is necessary to give separate attention to the two characteristics of speed and quality and to study their relationships is amply justified by the results presented in this paper.

The wide variation both in the relationship of speed and quality and in the general efficiency of writing indicates a need for the determination of standards.

A tentative standard in speed and quality is offered for further verification or modification.

There is especial need of attention to writing in the upper

grades in order that it may continue to improve beyond the intermediate period.

The value of special instruction in writing and of keeping records of the progress of the pupils in a particular school or school system is apparent from the study of School D.

The question whether speed and quality should progress together or whether one characteristic should be emphasized above the other in certain grades is a matter for further investigation.

Finally, upon all of these points the data at our command should be extended by studies from other school systems.

THE INTERESTS OF CHILDREN OF THE PRIMARY AND INTERMEDIATE GRADES IN THE USE OF COLOR

W. C. REAVIS
St. Louis, Missouri

The following study is an attempt to find out the primary interests of children of the lower grades in the use of color. It deals with three questions: (1) In what colors are children of the primary and intermediate grades most interested? (2) In their undirected representations, do they give major consideration to accuracy of representation, or to playing with favorite colors? (3) In following their own initiative, do they make use of color primarily as a means of representation, or for the pleasurable sensations derived?

In order to ascertain with some degree of certainty the colors that give children the most delightful sensations, the following test was arranged. Colored squares of paper were prepared, representing each of the spectrum colors, and sets were given to each child of the first three grades to mount in the order of his preference. The pupils of the fourth and fifth grades were given the spectrum colors, and after they had used them, each one was asked to designate his favorite color and his second choice. Tables of frequency were compiled from these data, and the results are shown in surfaces of frequency in Chart I. An examination of the data for the first three grades showed that it was not worth while to compute tables beyond the second choice. Color as the expression of a third, fourth, fifth, or sixth choice was merely a perfunctory matter.

In the surfaces of frequency of Chart I, the first- and second-choice colors of 74 children of the first grade, 50 of the second grade, 60 of the third grade, 42 of the fourth grade, and 39 of the fifth grade are given. The ordinate shows the percentage of children, and the abscissa the spectrum colors in the following order: red, blue, yellow, violet, orange, green. Figs. 1 to 5 inclusive show the

favorite colors of the first five grades respectively; and Figs. 6 to 10 inclusive show the second-choice colors of the same pupils. The curves indicate that red and blue are the colors in which the large majority of children are most interested. However, the color interests of the children of the intermediate grades appear to have widened.

CHART I

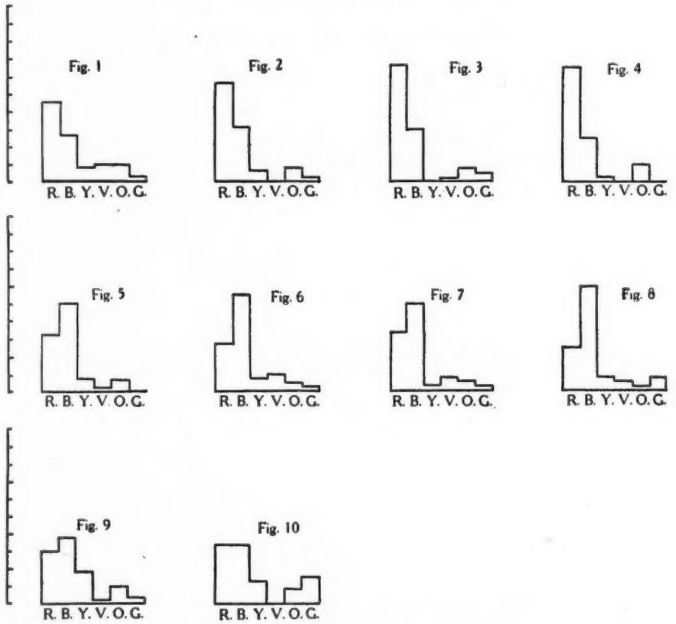
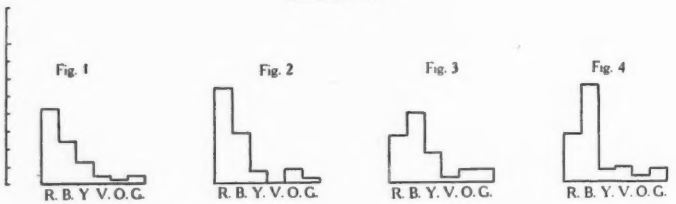


Fig. 1
R. B. Y. V. O. G.
Fig. 2
R. B. Y. V. O. G.
Fig. 3
R. B. Y. V. O. G.
Fig. 4
R. B. Y. V. O. G.
Fig. 5
R. B. Y. V O. G.
Fig. 6
R. B. Y. V. O. G.
Fig. 7
R. B. Y. V. O. G.
Fig. 8
R. B. Y. V. O. G.
Fig. 9
R. B. Y. V. O. G.
Fig. 10
R. B. Y. V. O. G.

There was no doubt regarding the expression of individual choices of colors by the pupils of the fourth and fifth grades in the foregoing test. However, as the pupils of the first, second, and third grades did have an opportunity to see how other pupils of their grade arranged the colors, it was thought that they might have been influenced to some extent by imitation. Hence, as a check on the validity of the results obtained from these grades, thirty children of the same grades in another school were given the

same test, individually. The surfaces of frequency obtained by compiling the choices of this group were then compared with the surfaces of frequency obtained by combining Figs. 1, 2, and 3 of Chart I, and likewise Figs. 7, 8, and 9, when it was found that the curves were almost identical. These curves are shown in the following Chart II in which Fig. 1 gives the distribution of the favorite colors of the group of thirty children, and Fig. 2 shows that of the composite group; while Figs. 3 and 4 show the distribution of second-choice colors of the same groups respectively.

CHART II



Hectographed outlines of birds were next given to the children with the instructions that they were to fill in the outlines just as they pleased. The birds chosen for the test were those common to the vicinity. In fact, they were seen daily in the trees on the school ground, and were the subject of nature-study lessons several weeks before the tests were given. All of the pupils recognized the birds, as was ascertained by holding the outlines before the class, before giving them to the children with the instructions mentioned above.

Figs. 1 to 5 of Chart III show the way in which the outlines of the bluejay were colored by the pupils of the first five grades, respectively. The abscissa indicates the percentage of children, and the ordinate the following colors (reading from left to right): red, blue, yellow, brown, any combination of two different colors designated in the chart by *M*, and conglomerate mass of colors.

Chart IV shows the coloring of the outlines of the woodpecker, and is similar in every respect to Chart III, as is Chart V that follows, which shows the coloring of the outlines of the English sparrow.

A careful examination of the data shown in Figs. 1, 2, and 3 of Charts III, IV, and V reveals several interesting facts regarding

CHART III

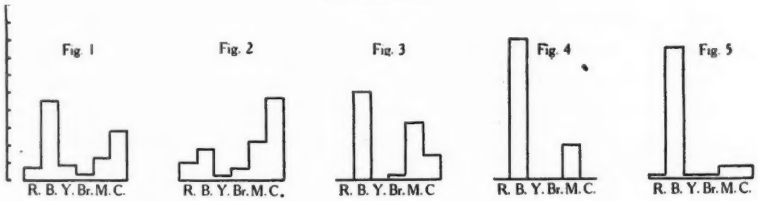
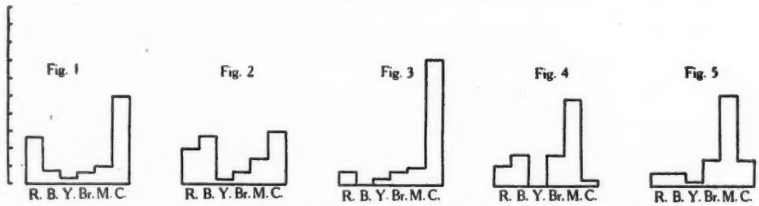
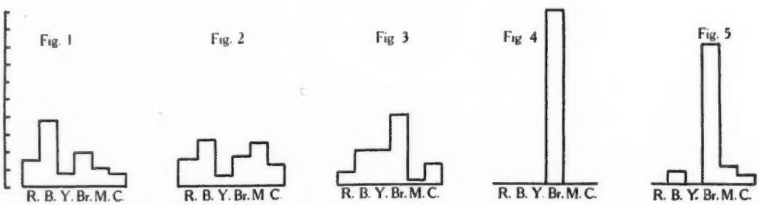


CHART IV



NOTE.—In every drawing of the pupils of the fourth and fifth grades the head of the woodpecker is colored red. For percentage of pupils of the other grades who colored the head the same way, see Chart VI. Hence, the colors shown in Chart IV refer to body, wings, and tail. For example, the pupil may have colored the head correctly and the body, wings, and tail a single color, a combination of two colors, or a conglomeration of colors.

CHART V



the use of color by the pupils of the primary grades: (1) A considerable number filled in the outlines without manifesting any concern whatever in exact representation, as was evidenced by the indis-

criminate use of all the colors of the spectrum in painting a single bird. (2) Some of the children seemed to take a cue from the most striking detail, and filled in the outline with that color only. For example, they colored the jay with a single shade of blue and the woodpecker red. (3) Another group made serious attempts at truthful representation, indicated by their attention to the proportions of the different details. However, their interest in strong color seemed to have caused them to err grievously in the choice of colors necessary to make even the semblance of a truthful representation.

The work of the fourth and fifth grades differed markedly from that of the lower grades, although a few of the pupils appeared to be just as erratic and indifferent to correct results as the younger children. (1) A majority of the pupils made use of tones of color in representing a bird, a fact that was not observed in a single drawing of the primary children. (2) The pupils of the intermediate grades, excepting the erratic ones referred to above, consumed much more time in filling in the outlines, thus showing the presence of external standards in contrast with the spontaneity and absence of standards in the minds of most of the children of the first three grades. (3) The intermediate-grade pupils greatly increased their percentages in the selection of correct colors, and in attention given to details, as is shown by the surfaces of frequency in Charts III, IV, and V, and in Chart VI that follows.

CHART VI

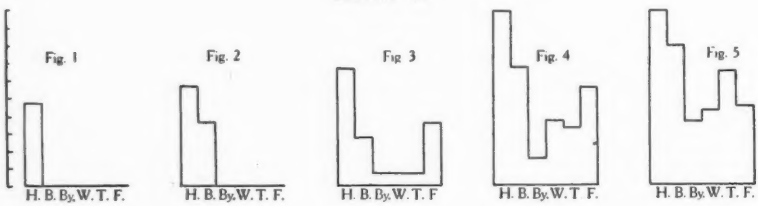


Chart VI was compiled from the drawings of the woodpecker shown in Chart IV. The ordinate gives the percentage, and the abscissa the following details (reading from left to right): head, bill, body, wings, tail, feet. The woodpecker was chosen for the reason that its details are most marked, and it had been closely

observed by the classes in their nature-study lessons several weeks before the tests were given.

The surfaces of frequency for the pupils of the first three grades point out that only the most significant details were represented with any degree of accuracy. Even these were ignored in many instances by children who apparently became intoxicated with the bright colors they were permitted to use in free and undirected play. With the fourth and fifth grades the drawings were altogether different. They represented significant details with great accuracy, and truthfully portrayed the minor details in almost 50 per cent of the cases.

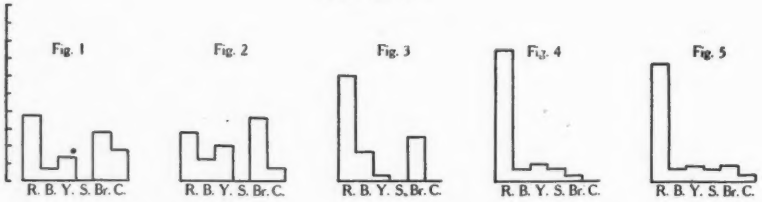
Another noticeable fact in the drawings was the relative development of the power to grasp and give attention to details as the pupil advanced through the primary into the intermediate grades. This appeared to be the rise of a new interest in more exact representation due to the consciousness of an objective standard of form and color appropriateness resulting from age readjustments, and instruction. This observation was further corroborated by the data shown in Chart IV, in which the grosser errors tended to disappear as the pupils advanced; shown by the facts that 55 per cent of the pupils of the first and second grades, and 21 per cent of the third grade colored all parts of the bird the same, while only 12 per cent of the fourth grade and 9 per cent of the fifth grade committed the same error.

A different situation was presented in the next test. The pupils were asked to paint a sled. The teachers refrained from giving any directions or suggestions, and the children had to rely upon their own initiative for the selection of color, and the form they were asked to represent. The results are shown in Chart VII, in which the ordinate shows the percentage, and the abscissa the following colors: red, blue, yellow, any of the secondary colors, brown or black, conglomeration of colors.

Excepting two facts, the results of the above test do not differ essentially from those of previous tests: (1) The decrease of red as a leading color in the first two grades and the large use of neutral were certainly the result of a complication of the problem of form with the free use of color. Favorite colors seemed to be forgotten by many of the pupils in their efforts to meet the requirements of

form, and as a result they reacted in the way they had been taught to react in drawing objects, i.e., by employing light and dark. Some left the drawing simply in outline done with the black or brown pencil, thus showing that the problem of form had deprived them of the pleasure accruing from a free use of color; while others proceeded to fill in the outlines with the color or colors that pleased

CHART VII



them. (2) The decrease of the use of blue by all the pupils, especially those of the third, fourth, and fifth grades, was evidently due to psychological reasons. Blue is a color of rest, while red is a color of action. Therefore, the association of a color of rest with the drawing of a sled, which suggests one of the favorite and most active sports, could hardly be expected.

Without taking into consideration the pedagogy of color in relation to the art work of our public schools, we believe that this study at least warrants the following answers to the questions at issue: (1) Children of both primary and intermediate grades are interested in strong colors, chiefly red and blue. (2) The majority of children of the primary grades are interested more in the sensations derived from a free use of color, than in exact representation. They paint with great freedom, and apparently take little interest in the perfection of details. On the other hand, most of the children of the intermediate grades draw with less freedom but pay greater attention to accuracy of details, and manifest greater interest in the character of their results. They seem to realize the importance of objective standards, and put forth serious efforts to master the external facts that lead to a realization of their standards. (3) The interest of most of the children of the primary grades centers around sensation, while the intermediate-grade children appear to employ color primarily for purposes of representation.

BOOK REVIEWS

Plant and Animal Children, and How They Grow. By ELLEN TORELLE. Boston: D. C. Heath & Co., 1913. Pp. 230, 325 figures. $0.50.

The preface states that this book is written especially for the pupils of the elementary school. "It aims to make clear the ideas of evolution, heredity, variation, effect of environment, and the evolution of sex, without once mentioning these names." Most biologists would gasp at the idea of presenting these subjects in so brief a compass, and give a second gasp at the mention of making them clear to children. However, "the author has demonstrated in practical work in the schools . . . . that children are also able to comprehend the subject-matter when this is expressed in language suitable to their comprehension." The book is a simple and lucid account of an evolutionary series of plants and animals. The forms studied, however, are not sufficiently numerous to make the steps of evolution appear plausible. To jump, for instance, from "Hydra and its children" to the worm family, dealing primarily with the earth-worm, would be an impossible step for an adult, much less a child, trying to comprehend the evolution process. The reviewer fails to see wherein the laws of heredity are presented, and certainly the evolution of sex would not be understood by an adult who reads the book without previous biological knowledge.

The book is a good presentation of some facts and principles of growth. Reproductive processes are stressed out of due proportion, it seems, though it must be borne in mind that it is the intention of the book to serve as an introduction to sex hygiene. It would be an exceptional public school that would have facilities to study reproductive processes, for instance, in the molds, the algae, the early stages of the moss, and in such animals as amoeba, worms, etc. Such a book put into the public schools inevitably means that it will be simply a reader, that the information will be inaccurate, because there are no clear concepts of the things discussed, and such method of procedure in a science subject is necessarily vicious. It is wise to approach sex hygiene by way of biology, and the simple reproductive processes of animals and plants can readily lead up to a knowledge of the matter in man, but such a detailed biological approach as presented here is not essential, and the book in the hands of an ordinary teacher must lead to a mere memorizing of unintelligible materials instead of natural inductions from the child's observations.

E. R. DOWNING

UNIVERSITY OF CHICAGO

Farm Arithmetic. By C. W. BURKETT and KARL D. SWARTZEL. New York: Orange Judd Co., 1913. Pp. 280.

Farm Arithmetic is a most interesting attempt to relate the fundamentals of arithmetic to practical farm problems. The first-named author of the book is editor of an agricultural magazine; the second, a professor of mathematics in a state university. The book is not intended as an introduction to the principles of arithmetic, but as a text for the upper grades in the elementary schools, or as a supplement to any

other text which may be used in these grades. It attempts to present the quantitative side of farm life, and to teach many facts of modern agriculture. The nature and arrangement of the topics and problems indicate that the book is designed primarily to teach agriculture by means of arithmetic, rather than to teach arithmetic. The pupils must know arithmetic fairly well in order to solve the problems presented.

The chapter headings are similar to those of an elementary text on agriculture; as, Plant Feeding, Animal Feeding, Human Feeding, Dairy Products, Soil, Field Crops, Farm Animals, Farm Mechanics, Forestry, etc. The Animal Feeding chapter may be taken as an illustration of the nature of the problems. A preliminary discussion of the source of food states what the foods are and gives the percentages of different substances which green pasture grass contains. Similar tables of contents of other foods are given. Upon these percentages the pupil is asked to calculate the amounts of different substances in given quantities of animal food, as one ton of green grass, or of clover hay, corn, or corn stover. The amounts of different kinds of food substances—protein, carbohydrate, and fat, etc.—needed in a properly balanced ration of different farm animals are then given. These are made the basis for calculations upon the amounts of feed necessary to maintain or to fatten different kinds of farm animals.

The book is full of most interesting and important information for agricultural communities. The problems should help greatly in fixing this information. As a source of profitable and concrete supplementary problems the book should find a wide use.

O. W. C.

UNIVERSITY OF CHICAGO

Moral Training in the School and Home. A Manual for Teachers and Parents. By E. HERSHEY SNEATH and GEORGE HODGES. New York: Macmillan, 1913. Pp. 219. $0.80.

The Golden Deed Book. A School Reader. By E. HERSHEY SNEATH, GEORGE HODGES, and EDWARD LAWRENCE STEVENS. New York: Macmillan, 1913. Pp. 351.

The first of these two books discusses the moral training of children during the age period of the grades. The chief method advocated is the use of the story, and lists of stories for illustrating the virtues and duties of life are given. These lists will be valued by some who may be a little dismayed at the somewhat formidable number of virtues set down. The authors' remarks on the bodily, intellectual, social, political, aesthetic life are sensible and likely to be helpful.

The second of the two books contains a selection of stories for the eighth grade. Many of them are familiar classics, but some are new and tell of deeds which thrill even the grown-up reader. I think boys and girls will like them.

The Moral Education of School Children. By CHARLES KEEN TAYLOR. Philadelphia: C. K. & H. B. Taylor, 1913. Pp. 77. $0.75.

Part I contains some useful comments on the necessity of proper physical conditions in the school as a preliminary for any moral training. Part II gives lists of topics for discussion with children in elementary grades, with brief suggestions for

their treatment. Part III is a plea for the use of school premises in the evening for the entertainment and teaching of working girls and boys. The author's statement that his endeavor is "to furnish a complete outline which will make it unnecessary for the individual teacher to do much original work" seems over-optimistic.

The Way to the Heart of the Pupil. By HERMANN WEIMER. Translation by J. REMSEN BISHOP and ADOLPH NIEDERPRIEM. New York: Macmillan, 1913. Pp. 178.

The translators state in their preface that "there is afoot a subtly devised reactionary movement in educational experiment that concerns itself with the mechanical measurement of the results of the teacher's work." "This little book is a protest against mechanical methods in the general relationship of teacher and pupil." No leader can fail to be impressed by the sympathetic tone of the author. Parents would like to have their children in a school pervaded by such a personality. Some of the points treated are of value to all beginning teachers; some are less necessary in this country, e.g., the elaborate arguments against indiscriminate thrashing. Probably few, even of a "reactionary movement," would wish to revive intimidation on a general scale as an educational principle. In general the atmosphere of the book is, to some degree, that of a country which suffers from the formalism and conservatism often attendant upon the very excellence of administration and technic.

J. H. TUFTS

UNIVERSITY OF CHICAGO

Backward and Feeble-Minded Children. By E. B. HUEY. "Educational Psychology Monographs." Baltimore: Warwick & York, 1912. Pp. xii+213. $1.40.

This little volume has for its purpose the delineation of the mental status of 35 cases of children who occupy a borderline position between normality and feeblemindedness. The cases are chosen from the "brightest" children who could be found among the 1,300 inmates of the Lincoln State School and Colony. The author believes that this class of mentally deficient children is particularly worthy of study because of their great number, because of their peril to society due to the fact that they constitute a large proportion if not all of the instinctive criminals, and because they propagate their kind at a rapid rate if not prevented by some form of social institution.

The study is of value to students of mental deficiency and to all who have to deal with high-grade defectives in the schools, because of its full and clear presentation of a variety of typical cases. In this respect it supplements the statistical studies which give information regarding the ability of children of various grades of intelligence to pass certain tests by furnishing concrete pictures of individuals. These pictures give the reader a notion of the various types or forms by which the defect may be represented, for the author distinguishes ten types of cases. The most interesting distinction he makes is between children who are dull and those who are unstable. Among the latter group are some who are characterized by moral instability.

Besides the description of cases the author gives an introduction in which he discusses the classification of defectives and the terms used to describe them, and a chapter consisting of a syllabus for clinical examination.

A Cyclopedia of Education. Edited by PAUL MONROE and OTHERS. Vol. IV. New York: Macmillan, 1913. Pp. 740. $5.00.

The general comments which have been made upon this work in the reviews of the previous volumes apply equally to this fourth volume. The work is one which is proving to be of great value to educators of every sort. The information which is contained in these volumes is in a compact, well-organized form which makes it suitable not only for reference, but also for the systematic study of a subject. Much of the material is in a form in which it has not been previously available, and hence is virtually new.

A feature of the *Cyclopedia* which is very prominent in the present volume is the series of articles upon the systems of education in the various states, contributed by Professor Cubberley. This volume contains articles on Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Mississippi, etc., up to and including Oklahoma. Besides these state systems the volume contains accounts of the systems of various countries and important cities.

The authoritativeness of the majority of the articles is made apparent by a glance at the names of the contributors. Some of the longer articles of this volume, besides those mentioned in the preceding paragraph, which may serve as examples of this fact are the articles on "Medical Education" by Dr. A. Flexner, on "Medical Inspection," by Dr. L. P. Ayers, on "Memory" by Professor Pillsbury, on "Mental Measurement" by Professor Tichener, and the article on "Mission Education" by Secretary J. L. Barton of the American Board of Commissioners of Foreign Missions.

While it would not be difficult to make criticisms upon matters of minor importance—as in the case of any pioneer work—educators will acknowledge great indebtedness to the editors of this valuable work.

F. N. F.

BOOKS RECEIVED

AMERICAN BOOK CO., CHICAGO

Hin und Her: Ein Buch für die Kinder. By H. H. Fick. Cloth. Pp. 90. Illustrated. Price $0.30.

Philip of Texas. By James Otis. Cloth. Pp. 153. Illustrated. Price $0.35.

The Barnard Language Reader. By Marion D. Payne. Cloth. Pp. 142. Illustrated. Price $0.30.

Business Speller and Vocabulary. By Edward H. Eldridge, Ph.D. Cloth. Pp. 219. Price. $0.25.

Advanced Algebra. By Jos. V. Collins, Ph.D. Cloth. Pp. 342. Illustrated.

Principles of Bookkeeping and Farm Accounts. By J. A. Bexell and F. G. Nichols. Cloth. Pp. 180. Price $0.65.

Webster's Secondary-School Dictionary. Full buckram. Pp. 864. Illustrated. Price $1.50.

Sixty Lessons in Agriculture. By Burt C. Buffum, M.S., and David Clement Deaver. Cloth. Pp. 272. Illustrated. Price $0.80.

The Teaching of Arithmetic. By Alva Walker Stamper, Ph.D. Cloth. Pp. 284.

Essentials of Business Arithmetic. By George H. Van Tuyl. Cloth. Pp. 272. Price $0.70.

A Short Course in Commercial Law. By Frederick G. Nichols and Ralph E. Rogers. Cloth. Pp. 304. Price $0.80.

Essentials of Physics. By George A. Hoadley, C.E., Sc.D. Cloth. Pp. 556. Illustrated. Price $1.25.

New Medieval and Modern History. By Samuel Bannister Harding, Ph.D. Cloth. Pp. 800. Illustrated. Price $1.50.

New English Literature. By Reuben Post Halleck, A.M., LL.D. Cloth. Pp. 562. Illustrated. Price $1.30.

Little Dramas for Primary Grades. By Ada Maria Skinner and Lillian Nixon Lawrence. Cloth. Pp. 176. Illustrated. Price $0.35.

WARWICK & YORK, BALTIMORE

How I Kept My Baby Well ("Educational Psychology Monographs"). By Anna G. Noyes. Cloth. Pp. 193. Illustrated. Price $1.25.

Inductive versus Deductive Methods ("Educational Psychology Monographs"). By W. H. Winch. Cloth. Pp. 146. Price $1.25.

A Syllabus for the Clinical Examination of Children. By Edmund B. Huey. Paper. Pp. 45. Price $0.35 each, $2.50 per dozen.

Record Blanks ($0.40 per dozen):

Binet-Simon Test for Intelligence Age.
Home Record and History.
School Report.
A Point Scale of Tests for Intelligence.
Directions for Giving and Scoring Point Scale Tests.
Clinical Reference Cards. $0.30 per dozen.

THE MACMILLAN CO., NEW YORK

Pinocchio under the Sea. Translated from the Italian by CAROLYN M. DELLA CHIESA. Edited by JOHN W. DAVIS. Cloth. Pp. 201. Illustrated. Price $1.25 net.

The Pupils' Arithmetic, Book Six. By JAMES C. BYRNES, B.S., PH.M., JULIA RICHMAN, and JOHN S. ROBERTS, A.M., PH.M. Cloth. Pp. 432+ix. Price $0.50.

Materials and Methods in High School Agriculture. By WILLIAM GRANVILLE HUMMEL, M.S., and BERTHA ROYCE HUMMEL, B.L.S. Cloth. Pp. 385. Illustrated. Price $1.25.

The People's Health. By WALTER MOORE COLEMAN. Cloth. Pp. 307. Illustrated. Price $0.70.

Educational Resources of Village and Rural Communities. Edited by JOSEPH K. HART, Cloth. Pp. 277. Price $1.00.

HOUGHTON MIFFLIN CO., BOSTON

The Teaching of Spelling ("Riverside Educational Monographs"). By HENRY SUZZALO. Cloth. Pp. 129. Price $0.60.

Interest and Effort in Education ("Riverside Educational Monographs"). By JOHN DEWEY. Cloth. Pp. 101. Price $0.60.

Teaching the Common Branches. By W. W. CHARTERS, PH.D. Cloth. Pp. 355. Price $1.35.

Representative Cities of the United States. By CAROLINE W. HOTCHKISS. Cloth. Pp. 212. Illustrated. Price $0.65.

WORLD BOOK CO., YONKERS-ON-HUDSON

Barbara's Philippine Journey. By FRANCES WILLISTON BURKS. Cloth. Pp. 199. Illustrated.

Stories of Woods and Fields. By ELIZABETH V. BROWN. Cloth. Pp. 192. Illustrated. Price $0.40.

Stories of Childhood and Nature. By ELIZABETH V. BROWN. Cloth. Pp. 223. Illustrated. Price $0.40.

When the World Was Young. By ELIZABETH V. BROWN. Cloth. Pp. 160. Illustrated. Price $0.40.

GINN & CO., CHICAGO

The See and Say Series, Book One. By SARAH LOUISE ARNOLD, ELIZABETH C. BONNEY, and E. F. SOUTHWORTH. Cloth. Pp. 128. Illustrated. Price $0.35.

Manual for Teachers: To Accompany the See and Say Series, Book One. By SARAH LOUISE ARNOLD, ELIZABETH C. BONNEY, and E. F. SOUTHWORTH. Cloth. Pp. 214. Price $0.50.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Spelling Ability: Its Measurement and Distribution. By B. R. BUCKINGHAM, PH.D. Cloth. Pp. 116. Price $1.25.

Practice in the Case of School Children. By THOMAS JOSEPH KIRBY, PH.D. Cloth. Pp. 98. Price $1.00.

UNIVERSITY OF CHICAGO PRESS, CHICAGO

List of Approved Colleges and Universities in the North Central Association of Colleges and Secondary Schools for 1913 ("School Review Monographs," IV). By CHARLES H. JUDD. Paper. Pp. 32. Price $0.25 net.

HENRY HOLT & CO., NEW YORK

Rhetoric and the Study of Literature. By ALFRED M. HITCHCOCK. Cloth. Pp. 410. Price $1.00.

Tom Brown's School Days. By THOMAS HUGHES. Edited by W. HUSTON LILLARD. Cloth. Pp. 383. Price $0.45.

GOVERNMENT PRINTING OFFICE, WASHINGTON

Annual Report of the Board of Regents of the Smithsonian Institution: Showing the Operations, Expenditures, and Condition of the Institution for the Year Ending June 30, 1912. Cloth. Pp. 780. Illustrated.

CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE

Steps toward Educational Reform. By C. W. BAILEY, M.A. Cardboard. Pp. 111. Price $0.25.

RAND McNALLY & CO., CHICAGO

Globes and Maps in Elementary Schools, A Teachers' Manual. By LEON O. WISWELL. Cloth. Pp. 64. Illustrated.

MANUAL ARTS PRESS, PEORIA

Paper and Cardboard Construction. By GEORGE FRED BUXTON and FRED L. CURRAN. Cloth. Pp. 191. Illustrated. Price $1.50.

REGINA BOOK SHOP, LIMITED, REGINA

English for the Non-English. By NORMAN FERGUS BLACK, M.A., D. PAED. Cloth. Pp. 211.

ORANGE JUDD CO., NEW YORK

Farm Arithmetic. By CHARLES WILLIAM BURKETT and KARL DALE SWARTZEL. Cloth. Pp. 280. Illustrated.

DOUBLEDAY, PAGE & CO., NEW YORK

The Children's Book of Christmas Stories. Edited by ASA DON DICKINSON and ADA M. SKINNER. Cloth. Pp. 335. Price $1.25 net.

THE A-TO-ZED, BERKELEY

Elementary General Science, Book I. By PERCY E. ROWELL, M.S. Cloth. Pp. 198. Illustrated. Price $0.60.

D. C. HEATH & CO., BOSTON

A History of the United States. By HENRY ELDRIDGE BOURNE and ELBERT JAY BENTON. Cloth. Pp. 534+lxi. Illustrated. Price $1.00.

B. D. BERRY & CO., CHICAGO

English Grammar. By JOSEPH VILLIERS DENNEY and SILAS B. TOBEY. Cloth. Pp. 250.

FREE PUBLIC LIBRARY, JERSEY CITY

Monographs on Anniversaries and Festivals. By EDMUND W. MILLER. Paper.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN
Librarian, School of Education, the University of Chicago

Abbott, Allan. A high-school course in periodical literature. English J. 2:422–27. (S. '13.)

Addresses by citizens to school boys. El. School T. 14:117–31. (N. '13.)

Alton, Margaret. The mental value of the study of English grammar. Educa. 34:78–80. (O. '13.)

Anderson, L. F. The manual labor school movement. Educa. R. 46:369–86. (N. '13.)

Babcock, E. B. The use of phonetics in teaching elementary French. School R. 21:608–17. (N. '13.)

Bawden, William T. Agricultural education thru home projects: the Massachusetts plan. Voca. Educa. 3:86–105. (N. '13.)

Bennett, Charles A. Newcomb school of art: its relation to art industries. Voca. Educa. 3:119–25. (N. '13.)

Blaine, Anita McCormick. The ideals which led to the founding of the School of Education. El. School T. 14:73–81. (O. '13.)

Bowder, Witt. Education for the industrial advance of the wage-earner. Educa. 34:69–77. (O. '13.)

Bristol, George P. High school graduation and college entrance. Educa. R. 46:325–29. (N. '13.)

Brooks, E. C. Seven, eight, and nine years in the elementary school. El. School T. 14:82–92. (O. '13.)

Coover, J. Edgar. The Union High School questionnaires. Educa. 34:81–94. (O. '13.)

Corbin, John. The struggle for college democracy. Cent. 87:80–87. (N. '13.)

Crawshaw, F. D. The relation between and the control of manual arts and vocational education. El. School T. 14:107–116. (N. '13).

[1] *Abbreviations.*—Atlan., Atlantic Monthly; Cent., Century; Colum. Univ. Q., Columbia University Quarterly; Educa., Education; Educa. Bi-mo., Educational Bi-monthly; Educa. R., Educational Review; El. School T., Elementary School Teacher; English J., English Journal; J. of Educa. Psychol., Journal of Educational Psychology; Lit. D., Literary Digest; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; R. of Rs., Review of Reviews; School R., School Review; Voca. Educa., Vocational Education.

Curtis, Henry S. The rural church as a social center. Educa. 34:111–18. (O. '13.)

Dingee, Gertrude P. The value of Latin in the high school. Educa. Bi-mo. 8:23–27. (O. '13.)

Earle, Samuel Chandler. The organization of instruction in composition. English J. 2:477–87. (O. '13.)

Egbert, James C. Extension teaching at Columbia. Colum. Univ. Q. 15: 366–71. (S. '13.)

Flexner, Abraham. The German side of medical education. Atlan. 112: 654–62. (N. '13.)

Gaston, George H. A bibliography for the study of the history and government of Chicago. Educa. Bi-mo. 8:81–87. (O. '13.)

Glenny, Mrs. Bryant B. How may a community make a study of its schools as opportunities for vocational education? Voca. Educa. 3:79–85. (N. '13.)

Greenwood, James M. How New York City administers its schools. Educa. R. 46:217–28. (O. '13.)

Groszmann, Maximilian P. E. A tentative classification of exceptional children. Child (London) 4:33–39. (O. '13.)

Grupe, Mary A. How the problems of the rural schools are being met. Pop. Sci. Mo. 83:484–90. (N. '13.)

Heniger, A. Minnie Herts. The drama's value for children. Good Housekeeping 57:636–43. (N. '13.)

Hooper, Cyrus L. The Cornman and Wallin spelling tests. Educa. Bi-mo. 8:28–41. (O. '13.)

Hosic, James Fleming. The advance movement of teachers of English. Educa. 34:99–103. (O. '13.)

———. Co-operation of all departments in the teaching of English composition. School R. 21:598–607. (N. '13.)

Howerth, Ira W. The apportionment of school funds. Educa. R. 46: 273–84. (O. '13.)

Hughes, Helen Sard. "Literature for children": a protest. English J. 494–99. (O. '13.)

Inglis, Alexander. The distribution of pupils in the public high schools. Educa. R. 46:344–50. (N. '13.)

Jennings, H. M., and Hallock, A. L. Binet-Simon tests at the George Junior Republic. J. of Educa. Psychol. 4:471–75. (O. '13.)

Jones, Adam Leroy. Some new methods of admission to college. Educa. R. 46:351–60. (N. '13.)

Klapper, Paul. A judgment of the New York City schools. Educa. R. 46: 335–43. (N. '13.)

Lewis, J. C., Hoke, K. J., Welles, J. B., and Wilson, G. M. Accuracy of pupil reporting. Psychol. Clinic 7:135–41. (O. '13.)

Long, Percy W. Grades that explain themselves. English J. 2:488–93. (O. '13.)

(The) lost years of the schoolboy. Lit. D. 47:681. (18 O. '13.)
McKitrick, May. The adaptation of the work in English to the actual needs and interests of the pupils. English J. 2:405–16. (S. '13.)
Maclear, Martha. The Froebel fetich. Educa. R. 46:330–34. (N. '13.)
McManis, John T. Chicago schools and child welfare. Educa. Bi-mo. 8: 42–50. (O. '13.)
Mardorf, Mae F. Contributions to nature-study from the Chicago schools. Educa. Bi-mo. 8:78–80. (O. '13.)
Miner, James Burt. The scientific study of child development. Pop. Sci. Mo. 83:506–13. (N. '13.)
Molter, Harold. Practical suggestions for the teaching of sex hygiene. Educa. 34:95–98. (O. '13.)
(The) Montessori schools in Italy—an account based on personal visits by two Americans. Lit. D. 47:637–38. (11 O. '13.)
(The) need of more romantic mathematics. Current Opinion 55:260. (O. '13.)
Otis, Margaret. The Binet tests applied to delinquent girls. Psychol. Clinic 7:127–34. (O. '13.)
"Peopleizing" the museums. Lit. D. 47:757. (25 O. '13.)
Roberts, William M. Classes for apprentices in the Chicago Public Schools. Educa. Bi-mo. 8:16–22. (O. '13.)
Rounds, C. R., and Kingsbury, H. B. Do too many students fail? School R. 21:585–97. (N. '13.)
Schinz, Albert. Difference between the work of the high school, college and graduate school. Educa. R. 46:237–51. (O. '13.)
Schroeder, H. H. A real problem for educational psychology. J. of Educa. Psychol. 4:465–70. (O. '13.)
Sex education as its friends and its foes view it. Current Opinion 55:261–62. (O. '13.)
Starch, Daniel. The measurements of handwriting. J. of Educa. Psychol. 4:445–64. (O. '13.)
Sykes, Marion. Failures in the high school. Educa. Bi-mo. 8:8–15. (O. '13.)
Venable, Francis P. A question of morals. Educa. R. 46:361–68. (N. '13.)
Wells, Dora. An experiment in applied household science. Educa. Bi-mo. 8:1–7. (O. '13.)
Winter, John G. Greek and Latin in the schools of Belgium. School R. 21:618–26. (N. '13.)
Woolley, Helen T. Facts about the working children of Cincinnati, and their bearing upon educational problems. I. El. School T. 14:59–72. (O. '13.) II. 14:132–39. (N. '13.)
Young, Karl. High-school courses in the history of English literature. English J. 2:500–504. (O. '13.)